

30. (New) A device manufacturing method according to claim 10, further comprising:
generating the gas bearing by delivering gas through said plurality of apertures; and
evacuating said gas with a gas pump.

REMARKS

Claims 1-30 are pending. Claims 1, 4 and 10 have been amended solely to correct minor clerical errors and this amendment is not intended to narrow the scope of the claims.

Claims 15-30 are added.

Reconsideration in view of the above amendments and following remarks is respectfully requested.

Claim Rejection – 35 USC § 103

Claims 1, 4, 7, and 8-14 are rejected under 35 U.S.C. § 103(a) over Takizawa (US Pat. No. 5,471,279) in view of Ota (US Pat. No. 6,228,544). Applicants respectfully traverse this rejection for at least the following reason.

Applicants submit that the U.S. filing date of Ota is September 2, 1999 and the effective U.S. date of the present application is April 21, 1999 (Foreign Priority) which is earlier than the filing date of Ota. Foreign priority was claimed at the time of filing under 35 U.S.C. § 119(a)-(d) based on filing in Europe of Application No. 99201223.7 in English. A certified copy of Applicants' European application was submitted with the filing of the present application on April 19, 2000. The Examiner Acknowledged, in the Office Action dated April 17, 2002, Applicants' priority claim and indicated that all of the priority documents had been received. Consequently, Ota is precluded from use as a prior art reference as Applicants have established a date of invention prior to the filing date of Ota.

As Ota is not prior art, the combination of Takizawa and Ota fails to establish a *prima facie* case of obviousness.

Therefore, Applicants submit that claims 1, 10 and 12, and claims 4, 7-9, 11, 13, 14 and 25-30 which depend from either claim 1, 10 or 12 are patentable and respectfully request that the rejection of claims 1, 4, 7, and 8-14 under § 103(a) be withdrawn.

Claims 12 and 13 are rejected under 35 U.S.C. § 103(a) over Leoff (US Pat. No. 3,603,646) in view of Doley et al. (US Pat. No. 6,161,311). Applicants respectfully traverse this rejection for at least the following reasons.

The Examiner contends that Leoff discloses all the structure set forth in the claims. The Examiner concedes that Leoff is silent about an ionizer constructed and arranged to ionize the gas. The Examiner asserts, however, that the use of an ionizer to ionize the gas in a semiconductor wafer handling system is routine in the art as is evident from the teaching of Doley (abstract) and thus it would have been obvious to modify Leoff by including an ionizer constructed and arranged to ionize the gas. Applicants respectfully disagree.

Claim 12 recites a substrate preparing device in a lithographic projection apparatus including an intermediate table on which a substrate can be positioned before transfer to a substrate table in a lithographic projection apparatus, the intermediate table including a major surface provided with a plurality of apertures and gas bearing generator constructed and arranged to generate a gas bearing between the major surface and substrate located thereon, and an ionizer constructed and arranged to ionize the gas.

Doley et al. discusses an apparatus and method for reducing particles in epitaxial reactors used for epitaxial deposition of materials onto a silicon wafer. The apparatus includes lines for delivering a purge gas into a chamber handling the wafer. The purge gas is ionized with ionizers. The conductive ionized gas facilitates the discharge of particles from the wafer or surfaces of the reactor chamber. Doley et al. is, however, only concerned about producing defect free epitaxial growth silicon layers by reducing or eliminating the undesirable contaminate particles that may enter the semiconductor manufacturing equipment. In contrast, the invention recited in claim 12 is concerned, for example, about eliminating potential sudden discharge of the wafer in a lithographic projection apparatus. Therefore, one of skill in the art would not have been motivated to modify the ionizer of Doley et al. and combine the ionizer of Doley et al. with the wafer transport system of Leoff and even if combined one of skill in the art would not obtain the subject matter recited in claim 12, for example, a gas bearing between the major surface of an intermediate table and a substrate located thereon and an ionizer constructed and arranged to ionize the gas. Consequently, neither Leoff nor Doley et al. disclose, teach or suggest, alone or in combination, the subject matter recited in claim 12.

Therefore, Applicants respectfully submit that claim 12 and claim 13 and new claims 15-24 which depend therefrom are patentable and respectfully request that the rejection under § 103(a) be withdrawn.

Claim 2 is rejected under 35 U.S.C. § 103(a) over Takizawa (US Pat. No. 5,471,279) and Ota (US Pat. No. 6,228,544) as applied to claim 1 and further in view of Doley et al. (US Pat. No. 6,161,311). Applicants respectfully traverse this rejection for at least the following reasons.

As stated above, Ota is precluded from use as a prior art reference. Therefore, the combination of Takizawa, Ota and Doley et al. fails to establish a *prima facie* case of obviousness.

Therefore, Applicants respectfully submit that claim 2 is patentable and respectfully request that the rejection of claim 2 under § 103(a) be withdrawn.

Claims 3, 5 and 6 are rejected under 35 U.S.C. § 103(a) over Takizawa (US Pat. No. 5,471,279) and Ota (US Pat. No. 6,228,544) as applied to claim 1 and further in view of Tsutsui (US Pat. No. 4,720,732). Applicants respectfully traverse this rejection for at least the following reasons.

As stated above, Ota is precluded from use as a prior art reference. The combination of Takizawa, Ota, and Tsutsui thus fails to establish a *prima facie* case of obviousness.

Therefore, Applicants respectfully submit that claims 3 and 5, and claim 6 which is dependent from claim 3, are patentable and respectfully request that the rejection of claims 3, 5 and 6 under § 103(a) be withdrawn.

CONCLUSION

In view of the foregoing, the claims are now in form for allowance, and such action is hereby solicited. If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, he is kindly requested to contact the undersigned at the telephone number listed below.

Attached is a marked-up version of the changes made to the claims by the current amendment. The attached Appendix is captioned "**Version with marking to show changes made**".

All objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited.

Respectfully submitted,

Pillsbury Winthrop LLP

By:


John P. Darling

Reg. No. 44,482

Tel. No.: (703) 905-2045

Fax. No.: (703) 905-2500

JPD/KG
1600 Tysons Boulevard
McLean, VA 22102
(703) 905-2000

Attachment:
Appendix (pp. 9-10)

APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims have been amended as follows:

1. (Twice Amended) A lithographic projection apparatus, comprising:
 - a radiation system constructed and arranged to supply a projection beam of radiation;
 - a mask table provided with a mask holder [for holding] constructed and arranged to hold a substrate;
 - a substrate table provided with a substrate holder [for holding] constructed and arranged to hold a substrate;
 - a projection system constructed and arranged to image an irradiated portion of the mask onto a target portion of the substrate;
 - a preparatory station comprising an intermediate table on which a substrate can be positioned before transfer to the substrate table,
 - the intermediate table comprising a major surface provided with a plurality of apertures; and
 - a gas bearing generator constructed and arranged to generate a gas bearing between said major surface and a substrate located thereon.
4. (Twice Amended) An apparatus according to claim 1, wherein said gas bearing has a thickness less than 150 μm .
10. (Twice Amended) A device manufacturing method comprising:
 - (a) providing a mask table with a mask which contains a pattern,
 - (b) providing a substrate table with a substrate which is at least partially covered by a layer of radiation-sensitive material,
 - (c) prior [subsequent] to (b), providing the substrate to an intermediate table comprising a major surface provided with a plurality of apertures, and maintaining the

substrate for a given time interval upon a gas bearing generated between the major surface and the substrate; and

(d) using a projection beam of radiation to project an irradiated part of the mask onto a target area of the layer of radiation-sensitive material.

Claims 15-30 are new.

End of Appendix